

## Notification of Reason(s) for Refusal

Patent Application No.:	Patent Application No. 2004-562062
Drafting Date:	January 30, 2007
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Applied Provision:	Patent Law Section 17bis (3), Section 29(2), Section 36

### <<<< Final Notification of Reason(s) for Refusal >>>>

This application should be rejected for the following reasons. An argument, if any, in this regard, might be filed within three months from the dispatch date of this office action.

### Reasons

1. The amendment submitted on 12/28/2006 does not comply with the requirements under Patent Law Section 17bis (3), since it is outside of the matters described in the specification or drawings as filed.
2. The invention(s) in the below listed claim(s) of the subject application should not be granted under the provision of Patent Law Section 29(2), since the invention(s) could have easily been made by persons who have common knowledge in the technical field, to which the inventions pertain, on the basis of invention(s) described in the below listed publication(s) which were circulated in Japan or foreign countries prior to the filing of the subject application.
3. In this application, a definition of claims does not comply with the requirements under Patent Law Section 36(6)(ii) in the following points.
4. In this application, a definition of claims does not comply with the requirements under Patent Law Section 36(4)(i) in the following points.

Note(The list of cited documents, etc. is shown below.)

#### (Reason 1)

1. Claim1 was amended so that Ge is an indispensable ingredient.

The amended claim contains B which is partially replaced with Ge and

further replaced with V, Nb, Ta, W, Mo.

However, it is described that "B may be partially replaced with V, Nb, Ta, Ge, W, Mo" in the specification as filed and it is only described that B is replaced Ge in the embodiment. Therefore, replacing B with Ge and one selected from V-Mo is not concretely described, and it is not a matter self-evident for a person skilled in the art on the basis of the description.

2. Claims 2-8 are defined by referring to claim 1 which describes the phosphor activated with Eu and Mn and these claims are defined by including a specified luminous component.

However, although "a mixture of up to 8 luminophor components" is described in the specification as filed, it is not said that an individual concrete combination of the specified Eu and Mn activated phosphor which is described in amended claim 1 and the specified luminous component described in amended claims 2-7 is described.

3. In amended claim 7, limitation which is described as "a sensitizer from the group of Eu(II) is used...and, as a secondary activator, Mn(II) is used, "is deleted.

However, it is not considered that those other than one using the above described specific sensitizer is described in the specification as filed..

Therefore, in the points of above 1-3, the amendment submitted on 12/28/2006 is outside of the matters described in the specification or drawings as filed.

(Reason 2)

Claims 1-19

Cited documents 1-2

The cited document 1 discloses the phosphor in which matrix is a silicate including Ge and activated by Eu and Mn. The phosphor is included the general formula of phosphor of claim 1.

The inventions of this application differ from those described in the cited document 1 in the point of using white luminous body of LED. Since a combination of phosphors which have various luminous colors is a commonly used art for changing blue light into white in LED (see the cited document 2), using the

phosphor described in the cited document 1 for changing blue light into white is a matter at which a person skilled in the art would have easily arrived.

And it is not ascertained that using the phosphors including various compositions described in claim 1 provides a particular outstanding effect which is unexpected by a person skilled in the art.

(Reason 3)

1. It is unclear whether the phosphor which is described in claim 1 and activated with Eu and Mn can change Ultra-violet or blue light of an LED into white visible radiation or not in claim 1.

2. It is unclear that the description of (B, Si, P) of claim 1 means all of B, Si, and P or only P.

Si and P in (B, Si, P) are repeated to be Si and P which are described as a component in the explanation of the formula in which B may be replaced.

3. Does the definition of claim 2 mean including a particular luminous component in addition to the phosphor described in claim 1?

4. It is unclear what "having a color temperature 10000K-6500K and 3000K-2000K" of claim 8 concretely means. (Does it mean having a color temperature of one range or having a color temperature of both range at the same time?)

(Reason 4)

Claim 1 defines that the particular phosphor activated with Eu and Mn is applied to one of phosphors used in a white LED.

However, in the specification as filed, a combination of the above phosphor and other phosphor for getting white light is not concretely described, and it is not a matter self-evident for a person skilled in the art.

Since the matrix in the general formula described in claim 1 may be one in which the whole portion or one portion of B may be replaced by many kinds of metals, and  $Me^{II}$  is only specified as a mere monovalent cation, it includes many kinds of compositions.

However the phosphors of table 7 are some of the phosphors of claim 1. Since a property of a phosphor is changed if a matrix of a phosphor is changed, it is not ascertained that all phosphors of claim 1 shows two maximum spectrum and provides an excellent effect in an LED.

Therefore, the specification of this application is not definite and sufficient for the person skilled in the art to work the invention easily.

In claims 2-19, the specification of this application is not definite and sufficient for the person skilled in the art to work the invention easily because a necessary combination for obtaining white light is not specified.

(It is required that a clear corresponding relation between an embodiment and each claim should be explained in an Argument, and, on what basis, a reason why an excellent effect is obtained in each invention in each claim should be explained in the Argument.)

The list of the cited documents etc.

1. Kokai (Japanese unexamined patent publication) No. S53-57188
2. Kokai (Japanese unexamined patent publication) No. H10-112557

Reason(s) that this is final notification of reason(s) for refusal

This notification is one which notifies only the reasons for refusal which are necessitated by amendments made in response to a previous non-final notification of reasons for refusal.